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3400 Forest Insect and Disease Management August 19, 1980

Functional Assistance Trip

Forest Supervisor, Wenatchee NF

On July 29, Gregory Filip, Forest Pathologist in the Forest Insect and Disease Management Staff Group, visited the Chelan Ranger District, Wenatchee National Forest. Purpose of the visit was to examine several areas with current ponderosa pine sapling mortality and another area with mortality in second-growth grand fir and Douglas-fir. He was accompanied by Monty Bickford, SO Silviculturist; Tom Boebe, District Silviculturist; and Randy Nimen, District Reforestation Specialist.

They visited several areas that were burned in 1968 and were experiencing occasional sapling mortality; Futterman Creek, Bergman Gulch, Washington Creek, and Cooper Gulch (T. 28 N., R. 22 E., sec. 2, 3, 10, 11, 12, 14). These areas had been planted or seeded several times with ponderosa pine, yet several sites remained unstocked. In areas where regeneration was successful, several recently killed ponderosa pine were uprooted and examined. Mortality was associated with "J-rooting", root feeding insects, root diseases, or, quite commonly, a combination of all three. Root diseases were caused by either *Armillaria mellea* or *Fomes annosus* as determined by mycelial fans or conks at the root collars.

Many of the insect and disease problems found usually are minor when seedlings are growing vigorously. Root diseases, especially *Armillaria* and many root feeding insects, do not become problems unless trees are stressed. Since many of the areas they examined are drought-prone, it may be very difficult to maintain vigorous trees and thus prevent mortality caused by normally weak parasites. Our only recommendation would be to implement any measures that would improve tree vigor and thus reduce mortality.

Two areas were visited to examine mortality in second growth timber. In Darby Draw (T. 29 N., R. 20 E., sec 34), a few Douglas-firs and ponderosa pines were killed by either Armillaria root rot or Annosus root rot, especially saplings in the latter case. Because of the scattered and infrequent nature of the mortality, no particular disease management practice need be implemented.

In the Silica Pit area (T. 29 N., R. 20 E., sec. 33), several acres of mortality caused by laminated root rot in grand and Douglas-fir were found. Engelmann spruce, ponderosa pine, and lodgepole pine growing in close association with the infected firs appeared unaffected. These species are known to have some resistance to laminated root rot caused by *Phellinus weirii*, especially the pines. Proper disease management calls for removal of all grand fir and Douglas-fir in disease centers and a surrounding 50-foot area. These areas should then be regenerated with either ponderosa pine or lodgepole pine. Possibly spruce could be regenerated in areas too wet for the pines. The key is to discriminate against firs in diseased areas and favor disease-resistant species adapted to the site.

If further assistance is required, FIDM pathologists are available to provide information or visit problem areas.

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